

Release notes for ENDF/B Development n-056\_Ba\_137  
evaluation

**ENDF**  
**B-VII**.dev

April 26, 2017

- checkr Warnings:

1. A previous error halted parsing of the current section  
*MAT=5646, MF= 1, MT=451 (1): Parsing stopped*

```
ERROR(S) FOUND IN MAT=5646, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      256 TO      301
```

- checkr Errors:

1. A variable is outside the allowed ENDF range  
*MAT=5646, MF= 1, MT=451 (0): Variable range*

```
ERROR(S) FOUND IN MAT=5646, MF= 1, MT=451
MOD =      1 OUT OF RANGE      0 -      0      RECORD NUMBER      256
```

2. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 2, MT=151 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=5646, MF= 2, MT=151
SECTION 2/151 NOT IN DIRECTORY      RECORD NUMBER      303
```

3. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 1 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 1
SECTION 3/ 1 NOT IN DIRECTORY      RECORD NUMBER      515
```

4. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 2 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 2
SECTION 3/ 2 NOT IN DIRECTORY      RECORD NUMBER      542
```

5. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 4 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 4
SECTION 3/ 4 NOT IN DIRECTORY      RECORD NUMBER      569
```

6. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 16 (0): Directory (b)*

```
ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 16
SECTION 3/ 16 NOT IN DIRECTORY      RECORD NUMBER      584
```

7. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 17 (0): Directory (b)*

ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 17  
SECTION 3/ 17 NOT IN DIRECTORY RECORD NUMBER 596

8. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 22 (0): Directory (b)*

ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 22  
SECTION 3/ 22 NOT IN DIRECTORY RECORD NUMBER 602

9. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 28 (0): Directory (b)*

ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 28  
SECTION 3/ 28 NOT IN DIRECTORY RECORD NUMBER 616

10. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 32 (0): Directory (b)*

ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 32  
SECTION 3/ 32 NOT IN DIRECTORY RECORD NUMBER 626

11. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 51 (0): Directory (b)*

ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 51  
SECTION 3/ 51 NOT IN DIRECTORY RECORD NUMBER 634

12. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 52 (0): Directory (b)*

ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 52  
SECTION 3/ 52 NOT IN DIRECTORY RECORD NUMBER 649

13. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 53 (0): Directory (b)*

ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 53  
SECTION 3/ 53 NOT IN DIRECTORY RECORD NUMBER 663

14. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 54 (0): Directory (b)*

ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 54  
SECTION 3/ 54 NOT IN DIRECTORY RECORD NUMBER 675

15. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 55 (0): Directory (b)*

- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 55 | RECORD NUMBER | 687 |
| SECTION 3/ 55 NOT IN DIRECTORY            |               |     |
16. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 56 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 56 | RECORD NUMBER | 698 |
| SECTION 3/ 56 NOT IN DIRECTORY            |               |     |
17. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 57 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 57 | RECORD NUMBER | 709 |
| SECTION 3/ 57 NOT IN DIRECTORY            |               |     |
18. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 58 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 58 | RECORD NUMBER | 719 |
| SECTION 3/ 58 NOT IN DIRECTORY            |               |     |
19. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT= 91 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5646, MF= 3, MT= 91 | RECORD NUMBER | 729 |
| SECTION 3/ 91 NOT IN DIRECTORY            |               |     |
20. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT=102 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5646, MF= 3, MT=102 | RECORD NUMBER | 738 |
| SECTION 3/102 NOT IN DIRECTORY            |               |     |
21. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT=103 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5646, MF= 3, MT=103 | RECORD NUMBER | 760 |
| SECTION 3/103 NOT IN DIRECTORY            |               |     |
22. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT=104 (0): Directory (b)*
- |   |               |     |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5646, MF= 3, MT=104 | RECORD NUMBER | 775 |
| SECTION 3/104 NOT IN DIRECTORY            |               |     |
23. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT=105 (0): Directory (b)*

- |  |   |               |     |
|--|---|---------------|-----|
|  | ERROR(S) FOUND IN MAT=5646, MF= 3, MT=105 |               |     |
|  | SECTION 3/105 NOT IN DIRECTORY            | RECORD NUMBER | 787 |
24. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 3, MT=107 (0): Directory (b)*
- |  |   |               |     |
|--|---|---------------|-----|
|  | ERROR(S) FOUND IN MAT=5646, MF= 3, MT=107 |               |     |
|  | SECTION 3/107 NOT IN DIRECTORY            | RECORD NUMBER | 799 |
25. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 2 (0): Directory (b)*
- |  |  |               |     |
|--|--|---------------|-----|
|  | ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 2 |               |     |
|  | SECTION 4/ 2 NOT IN DIRECTORY            | RECORD NUMBER | 816 |
26. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 16 (0): Directory (b)*
- |  |   |               |     |
|--|---|---------------|-----|
|  | ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 16 |               |     |
|  | SECTION 4/ 16 NOT IN DIRECTORY            | RECORD NUMBER | 987 |
27. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 17 (0): Directory (b)*
- |  |   |               |     |
|--|---|---------------|-----|
|  | ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 17 |               |     |
|  | SECTION 4/ 17 NOT IN DIRECTORY            | RECORD NUMBER | 998 |
28. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 22 (0): Directory (b)*
- |  |   |               |      |
|--|---|---------------|------|
|  | ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 22 |               |      |
|  | SECTION 4/ 22 NOT IN DIRECTORY            | RECORD NUMBER | 1009 |
29. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 28 (0): Directory (b)*
- |  |   |               |      |
|--|---|---------------|------|
|  | ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 28 |               |      |
|  | SECTION 4/ 28 NOT IN DIRECTORY            | RECORD NUMBER | 1020 |
30. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 32 (0): Directory (b)*
- |  |   |               |      |
|--|---|---------------|------|
|  | ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 32 |               |      |
|  | SECTION 4/ 32 NOT IN DIRECTORY            | RECORD NUMBER | 1031 |
31. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 51 (0): Directory (b)*

- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 51 | RECORD NUMBER | 1042 |
| SECTION 4/ 51 NOT IN DIRECTORY            |               |      |
32. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 52 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 52 | RECORD NUMBER | 1070 |
| SECTION 4/ 52 NOT IN DIRECTORY            |               |      |
33. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 53 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 53 | RECORD NUMBER | 1096 |
| SECTION 4/ 53 NOT IN DIRECTORY            |               |      |
34. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 54 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 54 | RECORD NUMBER | 1121 |
| SECTION 4/ 54 NOT IN DIRECTORY            |               |      |
35. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 55 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 55 | RECORD NUMBER | 1146 |
| SECTION 4/ 55 NOT IN DIRECTORY            |               |      |
36. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 56 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 56 | RECORD NUMBER | 1170 |
| SECTION 4/ 56 NOT IN DIRECTORY            |               |      |
37. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 57 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 57 | RECORD NUMBER | 1195 |
| SECTION 4/ 57 NOT IN DIRECTORY            |               |      |
38. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 58 (0): Directory (b)*
- |   |               |      |
|---|---------------|------|
| ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 58 | RECORD NUMBER | 1220 |
| SECTION 4/ 58 NOT IN DIRECTORY            |               |      |
39. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 4, MT= 91 (0): Directory (b)*

- ERROR(S) FOUND IN MAT=5646, MF= 4, MT= 91  
SECTION 4/ 91 NOT IN DIRECTORY RECORD NUMBER 1244
40. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 5, MT= 16 (0): Directory (b)*
- ERROR(S) FOUND IN MAT=5646, MF= 5, MT= 16  
SECTION 5/ 16 NOT IN DIRECTORY RECORD NUMBER 1269
41. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 5, MT= 17 (0): Directory (b)*
- ERROR(S) FOUND IN MAT=5646, MF= 5, MT= 17  
SECTION 5/ 17 NOT IN DIRECTORY RECORD NUMBER 1340
42. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 5, MT= 22 (0): Directory (b)*
- ERROR(S) FOUND IN MAT=5646, MF= 5, MT= 22  
SECTION 5/ 22 NOT IN DIRECTORY RECORD NUMBER 1366
43. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 5, MT= 28 (0): Directory (b)*
- ERROR(S) FOUND IN MAT=5646, MF= 5, MT= 28  
SECTION 5/ 28 NOT IN DIRECTORY RECORD NUMBER 1554
44. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 5, MT= 32 (0): Directory (b)*
- ERROR(S) FOUND IN MAT=5646, MF= 5, MT= 32  
SECTION 5/ 32 NOT IN DIRECTORY RECORD NUMBER 1657
45. Missing a section in directory so your directory is messed up. This error will break everything else  
*MAT=5646, MF= 5, MT= 91 (0): Directory (b)*
- ERROR(S) FOUND IN MAT=5646, MF= 5, MT= 91  
SECTION 5/ 91 NOT IN DIRECTORY RECORD NUMBER 1705

- **psyche** Warnings:

1. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ISOTOPE MASS = 137. L = 1 / STRENGTH FUNCTION IS 1.27689E-04 / AVERAGE GAMMA WIDTH 3.90000E-02 / LIES OUTSIDE LIMITS 4.00000E-02 TO 9.00000E+00 EV. (0): URR str. ftn.*

```
FILE 2
SECTION 151
ISOTOPE MASS = 137. L = 1
STRENGTH FUNCTION IS 1.27689E-04
AVERAGE GAMMA WIDTH 3.90000E-02
... [1 more lines]
```

2. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 2.11829E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

```
FILE 2
SECTION 151
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05
STRENGTH FUNCTION 2.11829E-05
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
... [1 more lines]
```

3. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 1.88556E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

```
FILE 2
SECTION 151
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05
STRENGTH FUNCTION 1.88556E-05
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
... [1 more lines]
```

4. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 2.27805E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

```
FILE 2
SECTION 151
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05
STRENGTH FUNCTION 2.27805E-05
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
... [1 more lines]
```

5. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 3.05942E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

```
FILE 2
SECTION 151
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05
STRENGTH FUNCTION 3.05942E-05
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
```

6. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 3.79420E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

```
FILE 2
SECTION 151
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05
```



- STRENGTH FUNCTION 3.79420E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
- ... [1 more lines]
7. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 5.90198E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05  
STRENGTH FUNCTION 5.90198E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04  
... [1 more lines]
8. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 5.25502E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05  
STRENGTH FUNCTION 5.25502E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
9. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 3.18278E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05  
STRENGTH FUNCTION 3.18278E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
10. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 3.09997E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05  
STRENGTH FUNCTION 3.09997E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
11. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05 / STRENGTH FUNCTION 2.11824E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05  
STRENGTH FUNCTION 2.11824E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04

12. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05 / STRENGTH FUNCTION 1.88557E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05  
STRENGTH FUNCTION 1.88557E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04

13. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05 / STRENGTH FUNCTION 2.27800E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05  
STRENGTH FUNCTION 2.27800E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04

14. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05 / STRENGTH FUNCTION 3.05938E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05  
STRENGTH FUNCTION 3.05938E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04

15. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05 / STRENGTH FUNCTION 3.79422E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05  
STRENGTH FUNCTION 3.79422E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04

16. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05 / STRENGTH FUNCTION 5.90202E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05  
STRENGTH FUNCTION 5.90202E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
17. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05 / STRENGTH FUNCTION 5.25512E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05  
STRENGTH FUNCTION 5.25512E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
18. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05 / STRENGTH FUNCTION 3.18286E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05  
STRENGTH FUNCTION 3.18286E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
19. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05 / STRENGTH FUNCTION 3.10005E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11824E-05  
STRENGTH FUNCTION 3.10005E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
20. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 3.05954E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05  
STRENGTH FUNCTION 3.05954E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
21. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 5.25496E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05  
STRENGTH FUNCTION 5.25496E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
22. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 3.18290E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05  
STRENGTH FUNCTION 3.18290E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
23. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05 / STRENGTH FUNCTION 3.09985E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11829E-05  
STRENGTH FUNCTION 3.09985E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
24. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05 / STRENGTH FUNCTION 2.11828E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05  
STRENGTH FUNCTION 2.11828E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
25. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05 / STRENGTH FUNCTION 1.88556E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05  
STRENGTH FUNCTION 1.88556E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
26. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05 / STRENGTH FUNCTION 2.27803E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05  
STRENGTH FUNCTION 2.27803E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
27. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05 / STRENGTH FUNCTION 3.05942E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05  
STRENGTH FUNCTION 3.05942E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
28. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05 / STRENGTH FUNCTION 3.79421E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05  
STRENGTH FUNCTION 3.79421E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
29. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05 / STRENGTH FUNCTION 5.90177E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05  
STRENGTH FUNCTION 5.90177E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
30. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05 / STRENGTH FUNCTION 5.25499E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*
- FILE 2  
SECTION 151  
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05  
STRENGTH FUNCTION 5.25499E-05  
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04
31. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05 / STRENGTH FUNCTION 3.18275E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

```

FILE 2
SECTION 151
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05
STRENGTH FUNCTION 3.18275E-05
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04

```

32. Strength function in URR not in agreement with PSYCHE's expectations  
*FILE 2 / SECTION 151 / ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05 / STRENGTH FUNCTION 3.09999E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04 (0): URR str. ftn.*

```

FILE 2
SECTION 151
ENERGY = 1.25000E+04. STRENGTH FUNCTION IS 2.11828E-05
STRENGTH FUNCTION 3.09999E-05
LIES OUTSIDE LIMITS 1.00000E-04 TO 8.00000E-04

```

- recent Warnings:

1. Statistical weight of certain L values were incorrect  
*0: RRR goof (a)*

```

Calculate Cross Sections from Resonance Parameters (RECENT 2015-1)
=====
Retrieval Criteria----- MAT
File 2 Minimum Cross Section- 1.0000E-10 (Standard Option)
Reactions with No Background- Output (Resonance Contribution)
... [503 more lines]

```

- fudge-4.0 Warnings:

1. Missing a channel with a particular angular momenta combination  
*resonances / resolved (Error # 1): missingResonanceChannel*

```

WARNING: Missing a channel with angular momenta combination L = 0, J = 0.0 and S = 0.0 for "capture"
WARNING: Missing a channel with angular momenta combination L = 1, J = 1.0 and S = 0.0 for "capture"
WARNING: Missing a channel with angular momenta combination L = 1, J = 1.0 and S = 1.0 for "capture"
WARNING: Missing a channel with angular momenta combination L = 1, J = 2.0 and S = 1.0 for "capture"

```

2. Cross section does not match sum of linked reaction cross sections  
*crossSectionSum label 0: total (Error # 0): CS Sum.*

```

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.65%

```

- fudge-4.0 Errors:

1. The spin statistical weights are off, indicating missing channels  
*resonances / resolved / MultiLevel\_BreitWigner (Error # 0): badSpinStatisticalWeights*

```

WARNING: The spin statical weights for L=1 sums to 2.0, but should sum to 3.0. You have too few channels for re

```

2. Calculated and tabulated Q values disagree.  
*reaction label 10: n[multiplicity:'2'] + Ba136 (Error # 0): Q mismatch*

```

WARNING: Calculated and tabulated Q-values disagree: -6661903.231338501 eV vs -6903090. eV!

```

3. Calculated and tabulated Q values disagree.  
*reaction label 11: n[multiplicity:3'] + Ba135 (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -15769643.78619385 eV vs -1.60152e7 eV!
4. Calculated and tabulated Q values disagree.  
*reaction label 12: n + H1 + Cs136 (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -8427780.583816528 eV vs -8668630. eV!
5. Calculated and tabulated Q values disagree.  
*reaction label 13: n + H2 + Cs135 (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -13031389.76504517 eV vs -1.31276e7 eV!
6. Calculated and tabulated Q values disagree.  
*reaction label 14: Ba138 + gamma (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: 8855427.125808716 eV vs 8611390. eV!
7. Calculated and tabulated Q values disagree.  
*reaction label 15: n + He4 + Xe133 (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -2258838.374938965 eV vs -2.4929e6 eV!
8. Calculated and tabulated Q values disagree.  
*reaction label 16: H1 + Cs137-s (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -149575.532043457 eV vs -390530. eV!
9. Calculated and tabulated Q values disagree.  
*reaction label 17: H2 + Cs136-s (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -6203214.482879639 eV vs -6358510. eV!
10. Calculated and tabulated Q values disagree.  
*reaction label 18: H3 + Cs135-s (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: -6774156.824432373 eV vs -6942460. eV!
11. Calculated and tabulated Q values disagree.  
*reaction label 19: He4 + Xe134-s (Error # 0): Q mismatch*  
  
WARNING: Calculated and tabulated Q-values disagree: 6293370.30821228 eV vs 6.0462e6 eV!

• njoy2012 Warnings:

1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!  
*grouppr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)*

```
---message from conver---cannot do complete particle production for mt= 16
                           only mf4/mf5 provided
```

2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!  
*group...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)*

---message from conver---cannot do complete particle production for mt= 17  
only mf4/mf5 provided

3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!  
*group...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)*

---message from conver---cannot do complete particle production for mt= 22  
only mf4/mf5 provided

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!  
*group...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)*

---message from conver---cannot do complete particle production for mt= 28  
only mf4/mf5 provided

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!  
*group...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)*

---message from conver---cannot do complete particle production for mt= 32  
only mf4/mf5 provided

6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!  
*group...compute self-shielded group-averaged cross-sections (5): GROUPR/conver (0)*

---message from conver---cannot do complete particle production for mt= 91  
only mf4/mf5 provided